

Part 2: Naming and Standard Form

4. Write the following polynomials in standard form. Then name them.

Original	Standard Form	Name
$3x - 5x^2 + 15$	$-5x^2 + 3x + 15$	quadratic trinomial
$8 + x^3$	$x^3 + 8$	cubic binomial
21	21	constant monomial

Part 3: Operations with Polynomials

5. Perform the indicated operation to write each polynomial in **standard form**.

a. $(3x^2 - 2x + 8) - (x^2 + 10x - 3)$

$$= 3x^2 - 2x + 8 - x^2 - 10x + 3$$

$$= 2x^2 - 12x + 11$$

b. $(10x^3 - 9x + 2) + (3x^2 + 7x - 5)$

$$= 10x^3 + 3x^2 - 2x - 3$$

c. $4xy(3x^2y - 2xy + 8x)$

$$= 12x^3y^2 - 8x^2y^2 + 32x^2y$$

d. $(x + 9)(x - 5)$

$$= x^2 + 9x - 5x - 45$$

$$= x^2 + 4x - 45$$

e. $(4x - 1)(3x + 1)$

$$= 12x^2 - 3x + 4x - 1$$

$$= 12x^2 + x - 1$$